

**What is claimed is:**

**[Claim 1]** 1. A method for driving a printing device to print a first print data and a second print data on a medium, the printing device having a printhead, the medium having a first swath area and a second swath area, the method comprising:

(a) moving the printhead along a first direction toward the first swath area, and controlling the printhead to print the first print data on the first swath area; and

(b) when the printhead has printed the first print data on the first swath area, moving the printhead to approach the second swath area along a second direction opposite of the first direction while the medium moves along a predetermined direction.

**[Claim 2]** 2. The method of claim 1 wherein there is a certain angle between the predetermined direction and the first direction.

**[Claim 3]** 3. The method of claim 1 further comprising:

(c) when the printhead leaves the first swath area and moves along the first direction, moving the second swath area along the predetermined direction.

**[Claim 4]** 4. The method of claim 3 wherein in step (c), the printhead is decelerated from a first speed to a second speed.

**[Claim 5]** 5. The method of claim 1 wherein in step (a), the printhead moves according to a steady speed to print the first print data.

**[Claim 6]** 6. The method of claim 1 wherein in step (b), the printhead is accelerated from a first speed to a second speed.

[Claim 7] 7. The method of claim 1 wherein step (b) further comprises: controlling the printhead to stay outside the second swath area while the medium is moving; and controlling the printhead to enter into the second swath area while the medium becomes still.

[Claim 8] 8. The method of claim 1 wherein the size of the first swath area is determined by number of pixels in the first print data.

[Claim 9] 9. A method for driving a printing device, the printing device having a printhead, the method comprising:

- (a) controlling the printhead to move along a first direction toward a first swath area of a medium, and controlling the printhead to print a print data on the first swath area according to the print data;
- (b) when the printhead has left the first swath area according to the first direction, driving the medium to move along a predetermined direction, computing a first duration by counting the time it takes the medium to move according to the predetermined direction so that the printhead can print on a second swath area next to the first print swath area, and computing a second duration by counting the time it takes the printhead to move from the first print swath area to the second swath area along the second direction opposite to the first direction; and
- (c) comparing the first duration with the second duration for controlling the timing when the printhead starts moving toward the second swath area according to the second direction.

[Claim 10] 10. The method of claim 9 wherein step (c) further comprises: if the first duration is longer than the second duration, driving the printhead to stop during a predetermined duration and then accelerate to a first speed along the second direction, wherein sum of duration of the predetermined duration and the second duration is not shorter than the first duration.

[Claim 11] 11. The method of claim 9 wherein there is a certain angle between the predetermined direction and the first direction.

[Claim 12] 12. The method of claim 9 wherein in step (b), the printhead leaves the first swath area according to a first speed and then the printhead is decelerated to a second speed.

[Claim 13] 13. The method of claim 9 wherein in step (a), the printhead has a steady speed.

[Claim 14] 14. The method of claim 9 wherein the printing device further comprises a first motor for driving the printhead and a second motor for driving the medium, and step (c) computes the first and second durations according to the driving ability of the first and second motors.

[Claim 15] 15. The method of claim 14 wherein the first and second motors are stepping motors.

[Claim 16] 16. The method of claim 9 wherein the medium moves along the predetermined direction when the printhead moves along the second direction.

[Claim 17] 17. A printing device comprising:  
a printhead for printing a first print data and a second print data on a first swath area and a second swath area respectively; and  
a controller electrically connected to the printhead for controlling the printhead to move along a first direction to print the first print data on the first swath area, and controlling the medium to move along a predetermined direction and controlling the printhead to approach the second swath area

along a second direction opposite to the first direction when the printhead has printed the first print data on the first swath area.

[Claim 18] 18. A printing device comprising:

a printhead for printing a print data on a first swath area of a medium along a first direction according to the print data; and  
a controller electrically connected to the printhead, wherein when the printhead has left the first swath area according to the first direction, the controller controls the medium to move along a predetermined direction, computes a first duration by counting the time it takes the medium to move according to the predetermined direction so that the printhead can print on a second swath area next to the first print swath area, computes a second duration by counting the time it takes the printhead to move from the first print swath area to the second swath area along the second direction opposite to the first direction, and compares the first duration with the second duration for controlling the timing when the printhead starts moving toward the second swath area according to the second direction.